

S/N: 10/034,323  
Reply to Office Action of October 18, 2006

Atty Dkt No. 2001-057-SFT (STK01057PUS)

### **Amendments to the Claims:**

Claims 28-40 are pending in this application. Please amend claims 28, 31, 33-35, and 38-40 as follows:

1                   28. (currently amended) A method of monitoring data stored on a  
2 primary storage system comprising:

3                   creating a sequence of mirrors-in-the-middle, each mirror-in-the-  
4 middle including a copy of data stored on the primary storage system at a fixed point  
5 in time;

6                   checking a first mirror-in-the-middle of the sequence of mirrors-in-the-  
7 middle to see if a copy of data stored on the first mirror-in-the-middle satisfies at  
8 least one consistency constraint; and

9                   if not, repeating checking previous mirrors-in-the-middle in the  
10 sequence of mirrors-in-the-middle until one of the checked previous mirrors-in-the-  
11 middle includes an uncorrupted copy of data satisfying the at least one consistency  
12 constraint.

1                   29. (previously presented) The method of claim 28 further  
2 comprising restoring the uncorrupted copy of data to the primary storage system.

1                   30. (previously presented) The method of claim 28 wherein checking  
2 comprises scanning for viruses.

1                   31. (currently amended) The method of claim 28 wherein checking  
2 comprises monitoring a database for consistency of constraints.

1                   32. (previously presented) The method of claim 28 further  
2 comprising storing the sequence of mirrors-in-the-middle using a data management  
3 appliance.

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1                   33. (currently amended) The method of claim 28 further comprising  
2 restoring the copy of data stored on the first mirror-in-the-middle to the primary  
3 storage system if the copy of data stored on the first mirror-in-the-middle satisfies the  
4 at least one consistency constraint.

1                   34. (currently amended) The method of claim 28 further comprising:  
2 if the copy of data stored on the first mirror-in-the-middle satisfies the  
3 at least one consistency constraint, checking a copy of data stored on at least one  
4 additional mirror-in-the-middle later in the sequence of mirrors-in-the-middle than the  
5 first mirror-in-the-middle to see if the copy of data stored on the at least one  
6 additional mirror-in-the-middle satisfies the at least one consistency constraint.

1                   35. (currently amended) A data management appliance comprising:  
2 a random-access storage unit storing a sequence of mirrors-in-the-  
3 middle, each mirror-in-the-middle including a copy of data stored on a primary  
4 storage system at a fixed point in time; and  
5 control logic in communication with the random-access storage unit,  
6 the control logic operative to checking a first mirror-in-the-middle of the sequence  
7 of mirrors-in-the-middle to see if a copy of data stored on the first mirror-in-the-  
8 middle satisfies at least one consistency constraint and, if not, repeating checking  
9 previous mirrors-in-the-middle in the sequence of mirrors-in-the-middle until one of  
10 the checked previous mirrors-in-the-middle includes an uncorrupted copy of data  
11 satisfying the at least one consistency constraint.

1                   36. (previously presented) The data management appliance of claim  
2 35 wherein the control logic is further operative to restore the uncorrupted copy of  
3 data to the primary storage system.

1                   37. (previously presented) The data management appliance of claim  
2 35 wherein checking comprises scanning for viruses.

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1                   38. (currently amended) The data management appliance of claim 35  
2 wherein checking comprises monitoring a database ~~for consistency of constraints~~.

1                   39. (currently amended) The data management appliance of claim 35  
2 wherein the control logic is further operative to restore the copy of data stored on the  
3 first mirror-in-the-middle to the primary storage system if the copy of data stored on  
4 the first mirror-in-the-middle satisfies the at least one consistency constraint.

1                   40. (currently amended) The data management appliance of claim 35  
2 wherein the control logic is further operative to check a copy of data stored on at  
3 least one additional mirror-in-the-middle later in the sequence of mirrors-in-the-  
4 middle than the first mirror-in-the-middle to see if the copy of data stored on the at  
5 least one additional mirror-in-the-middle satisfies the at least one consistency  
6 constraint if the copy of data stored on the first mirror-in-the-middle satisfies the at  
7 least one consistency constraint.